Amendments to the Claims

Claims 11 and 12 (canceled).

1. (currently amended) A method of manufacturing a semiconductor integrated circuit comprising the steps of:

disposing an upper interlayer on a stopper film layered on a surface of a lower interlayer film including a metal wiring embedded in a concave formed therein;

forming a via hole extending from the surface of said upper interlayer film to the surface of said stopper film at an opposite position to said metal wiring;

forming an organic film on the surface of said upper interlayer film and embedding the material of said organic film in said via hole, and forming a resist mask with an opening to communicate with the opening of said via hole on the surface of said organic film;

plasma etching said organic film formed on the surface of said upper interlayer film through the opening in said resist mask in an atmosphere of an etching gas and an inert gas;

simultaneously plasma etching said upper interlayer film exposed by plasma etching said organic film and the material of said organic film embedded in said via hole to ~~a predetermined~~ such depth which does not reach said stopper film in an atmosphere of an etching gas and an inert gas with the etching rate for said organic film with said etching gas higher than the etching rate for said upper interlayer film with said etching gas; and

removing the material of said organic film remaining in said via hole positioned at the bottom of a concave groove formed by said plasma etching and etching said stopper film positioned at the bottom of said via hole from which the material of said organic film is removed to expose said metal wiring.

2. (currently amended) A method of manufacturing a semiconductor integrated circuit comprising the steps of:

disposing an upper interlayer on a stopper film layered on a surface of a lower interlayer film including a metal wiring embedded in a concave formed therein;

forming a via hole extending from the surface of said upper interlayer film to the surface of said stopper film at an opposite position to said metal wiring;

forming an organic film on the surface of said upper interlayer film and embedding the material of said organic film in said via hole, and forming a resist mask with an opening to communicate with the opening of said via hole on the surface of said organic film;

plasma etching said organic film formed on the surface of said tipper interlayer film through the opening in said resist mask in an atmosphere of an etching gas including a molecular structure which produces no deposition and an inert gas;

simultaneously plasma etching said upper interlayer film exposed by plasma etching said organic film and the material of said organic film embedded in said via hole to a ~~predetermined~~ such depth which does not reach said stopper film in an atmosphere of an etching gas and an inert gas; and

removing the material of said organic film remaining in said via hole positioned at the bottom of a concave groove formed by said plasma etching and etching said stopper film positioned at the bottom of said via hole from which the material of said organic film is removed to expose said metal wiring.

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3 3. (original) The method of manufacturing a semiconductor integrated circuit according to claim 1, wherein said etching gas includes atoms of fluorine and atoms of carbon contained in a molecular structure, the number of the atoms of fluorine being three times or more than the number of the atoms of carbon.

4 4. (currently amended) The method of manufacturing a semiconductor integrated circuit according to claim 3, wherein said etching gas comprises ~~"CF_4"~~ CF_4.

5 5. (currently amended) The method of manufacturing a semiconductor integrated circuit according to claim 3, wherein said etching gas comprises ~~"C_2F_6"~~ C_2F_6.

6. (original) The method of manufacturing a semiconductor integrated circuit according to claim ~~1~~ 2, wherein said etching gas includes atoms of fluorine and atoms of carbon contained in a molecular structure, the number of the atoms of fluorine being three times or more than the number of the atoms of carbon.

7. (currently amended) The method of manufacturing a semiconductor integrated circuit according to claim ~~6~~, wherein said etching gas comprises ~~"CF_4"~~ CF_4.

8. (currently amended) The method of manufacturing a semiconductor integrated circuit according to claim ~~8~~, wherein said etching gas comprises ~~"C_2F_6"~~ C_2F_6.

9. (currently amended) The method of manufacturing a semiconductor integrated circuit according to claim ~~1~~, wherein a pressure in said atmosphere is ~~"100 [mToll]"~~ 100 ~~mToll~~ mtorr or higher.

10. (currently amended) The method of manufacturing a semiconductor integrated circuit according to claim ~~1~~ 2, wherein a pressure in said atmosphere is ~~"100 [mToll]"~~ 100 ~~mToll~~ mtorr or higher.